## Abstract of the Disclosure

The invention provides a thermal tolerant cellulase that is a member of the glycoside hydrolase family. The invention further discloses this cellulase as GuxA. GuxA has been isolated and characterized from Acidothermus cellulolyticus. The invention further provides recombinant forms of the identified GuxA. Methods of making and using GuxA polypeptides, including fusions, variants, and derivatives, are also disclosed.